## Contents:



## Overview

### Objective

The purpose of this lab is to become familiar with using and maintaining sequences, indexes and synonyms by:

- Creating, maintaining and using sequences
- Creating and maintaining indexes
- Creating private and public synonyms

### Prerequisites

1. Read Chapter 9, pages 287-288 on Synonyms
2. Read Chapter 10, pages 315-325 on Sequences and Indexes.
3. Review the slides L14_Sequences Index Synonyms on D2L.

### Demo Due Date:

For all sections, the **lab demo** is due in 1 week (**Mar 29-Apr02**) by the end of your lab session.

**Note:** As there is no classes on Friday Apr 02, 2021, students in the Friday lab section can either come to an earlier lab section to demo or hand in their SQL to the Assignment Folder.

All labs must be completed. Late labs will be marked as zero.

### Scoring:

Lab is out of **14** marks. Questions 1 to 14 are each worth 1 mark.

## Lab Assignment

1. Create a new table called **MYTEXTBOOK** in your schema. The attributes of the table are **(1 mark)**:

| | |
|---|---|
| text_id | number(5) |
| text_name | varchar2(25) |
| text_author | varchar2(50) |
| text_publisher | varchar2(25) |
| faculty_ref | number(5) |

2. Add the following data values to your **MYTEXTBOOK** table using the insert statement: (remember that varchar2 and date values are enclosed with single-quotes when using INSERT). ***(1 mark)***

| text_id | text_name | text_author | text_publisher | faculty_ref |
|---|---|---|---|---|
| | All computers | Know It All | Self | 3 |
| | No homework! | Tired Student | Publish | 1 |

**3.** Create a sequence called **textbook_seq** which will start with a value of **22**. Do not allow caching (i.e. specify the **NOCACHE** option). ***(1 mark)***

**4.** Update your mytextbook table with the sequence, placing the sequence numbers in the **text_id** column. ***(1 mark)***

**5.** Write a query to display the following information about your sequence: sequence name, its maximum value, the increment by size, and last number. Restrict the query to your **textbook_seq** sequence (Hint: use the **DESC USER_SEQUENCES** command to see the columns you can select). ***(1 mark)***

**6.** Make the **text_id** column the primary key for the mytextbook table. Provide a meaningful, conventional name for the constraint. ***(1 mark)***

**7.** Add the following data values to your **MYTEXTBOOK** table. When you add the values, be sure to use your **textbook_seq** sequence to enter the associated **text_id** values. Replace the <give your name> in the **text_author** column with your actual name. ***(1 mark)***

| text_id | text_name | text_author | text_publisher | faculty_ref |
|---|---|---|---|---|
| | Relational Databases | Ted Codd | IT | 2 |
| | The greatest book ever | *<give your name>* | Publish | 1 |

**8.** List all the **text_id**s and **text_author**s in your **MYTEXTBOOK** table. (Hint: use the **select** command). ***(1 mark)***

**9.** Create a non-unique index called **textname_idx** on the **text_name**. ***(1 mark)***

**10.** Display the index name, index type, and uniqueness that exist in the data dictionary for the **mytextbook** table. Be sure to limit your query to the **mytextbook** table. (Hint: use the **USER_INDEXES** table.). ***(1 mark)***

**11.** Create a synonym for your mytextbook table called **TEXT**. ***(1 mark)***

**12.** Using your new synonym, list all the **text_id**s and **text_author**s in your **MYTEXTBOOK** table. (Hint: use the **select** command). ***(1 mark)***

**13.** Display the synonym names that exist in the data dictionary. (Hint: use the **USER_SYNONYMS** table.). ***(1 mark)***

**14.** Clean up your schema by dropping your **mytextbook** table, your **textbook_seq** sequence and your **TEXT** synonym. ***(1 mark)***